Tics and Tourette Syndrome

Tics are fast, brief, repetitive movements or sounds that are not under an individual’s control.

Motor tics are tics that affect parts of the body such as the face, head, or shoulders. Vocal tics are tics that affect the muscles involved with breathing or speaking and cause sounds or vocalizations. Individuals with Tourette syndrome have multiple motor and vocal tics that begin in childhood and that are ongoing.

Signs and Symptoms
Common motor tics include eye blinking, facial grimacing, head or neck movements, and shoulder or upper body movements. Common vocal tics include grunts, coughs, sniffs, and throat-clearing noises. Individuals with Tourette syndrome may repeat words, sounds, or movements, and they may unintentionally say words or perform gestures that are socially inappropriate. Tics can be suppressed for periods but are not under the full control of the person who has them. Strong emotional states such as stress or excitement often worsen tics.

People often notice a feeling or sensation before a tic occurs. This feeling varies from person to person but is often described as an urge or a tension that builds up and is then relieved after the tic happens.

Many patients with Tourette syndrome also have other behavioral or psychiatric conditions, including obsessive-compulsive disorder (OCD) and attention-deficit/hyperactivity disorder (ADHD).

Cause
Most tics as well as Tourette syndrome are likely caused by a combination of factors related to an individual’s genes and surrounding environment. Some studies have suggested that tics are caused by dysfunctional connections between the parts of the brain that regulate movement. Rarely, tics can be caused by brain injury or infection. Tics can also be a side effect of certain medications.

Diagnosis
Both tics and Tourette syndrome are diagnosed based on a medical history and physical examination performed by a health care clinician. There is no single test to confirm these diagnoses. In certain instances, testing may be performed to exclude other disorders.

Prognosis
Tics often begin in childhood, and the location, frequency, and severity of tics can change over time. Many people diagnosed as having Tourette syndrome in childhood experience fewer symptoms or no symptoms by the time they become adults.

Treatment
If the tics are mild and do not interfere with daily life, treatment is not needed. If the tics are severe and cause problems with speech or activities, then behavioral therapy or medication should be considered. Behavioral therapy often trains individuals to become aware of the feelings that occur before a tic and then perform other movements that make it harder for the tic to occur. Medications that are commonly prescribed include clonidine, guanfacine, and medications that block dopamine. If an individual has both Tourette syndrome and another condition such as OCD or ADHD, it may be possible to take a medication that treats both disorders.

FOR MORE INFORMATION
• Centers for Disease Control and Prevention
  https://www.cdc.gov/ncbddd/tourette/facts.html
• National Library of Medicine
  https://medlineplus.gov/ency/article/000747.htm
• Mayo Clinic
  http://www.mayoclinic.org/diseases-conditions/tourette-syndrome/home/ovc-20163623

To find this and other JAMA Patient Pages, go to the For Patients collection at jamanetworkpatientpages.com.